

How the United States Became Independent in Radio

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The German empire had effectively penetrated the United States, in a radio sense, prior to the outbreak of the war in Europe. In August, 1914, by the establishment, two years earlier, of the super-high-power radio station at Sayville, Long Island, N. Y., to work with a similar government-owned and operated station at Nauzen, in Germany, thereby infringing, not our zealous guard Monroe doctrine, but our very status as a sovereign nation.

The assertion is not made that our position as a sovereign state was thereby challenged. As a matter of fact, our status did not then, nor do they now, prohibit such action.

Moreover, a station license was issued by our government covering the operation of the Sayville station and licenses also were granted to the German operators who operated it.

The establishment of German super-high-power radio stations within the United States may be viewed rather in the light of one phase of the keen rivalry then existing between the German and British empires, with the United States as part of the field of operations.

A British super-high-power radio station had also been established at New Brunswick, N. J., for transatlantic service, and three other stations were under construction. A similar station at Natick, Mass., and stations at Colman, Calif., and Kaula, Hawaiian Islands, the latter two stations for transatlantic service.

A second German station was under construction at Fribourg, N. J., with material and equipment imported from Germany, ostensibly for operation by a French company, but which, upon completion, was to be used to transmit the correspondence to the outbreak of hostilities in Europe, was claimed by the Germans and operated, for a time, by German operators.

The British-controlled stations were the property of the Marconi Wireless Telegraph Company of America, a company affiliated with the British Marconi Company, the stock of which American companies were largely held by British subjects, and consequently the policy of the company being swayed, if not directed, by British interests.

As strictly commercial ventures there could, of course, be no objection to the establishment of such super-high-power radio stations within our territory, but certainly no justification may be put forward for the interference within our borders of foreign-owned or foreign-controlled radio stations as military assets, and that military use will be made of such facilities, where they exist in extreme emergencies, is in doubt.

It is certain that the government or an American commercial concern, even if it had been so inclined, could not have been permitted to establish a super-high-power radio station at Hamburg, for example, to work with our Arlington station. Upon the outbreak of war in Europe the New Brunswick station was rendered inoperative as the British government prohibited the exchange of radio messages through this station with the corresponding station at Nauzen. As the transatlantic cables were available to the allies for communicating with this country, and the cable service was found to be adequate at that time.

The central powers, however, were promptly isolated as far as the exchange of rapid communications with North and South America, Asia, Africa and the greater part of Europe was concerned, due to the prompt cutting by the allies of all of her transatlantic cables and the severing of other channels of communication—except through the German radio stations.

The radio channels could not be destroyed or made inoperative except by the destruction of the radio stations themselves, and the destruction of the Sayville station by the allies would have involved an actual armed invasion of our territory.

Meanwhile every possible effort was made by the Germans to pass enormous volumes of radio traffic through the Nauzen, the Sayville, and subsequently the Tuckerton, stations; messages destined to points on land as well as to their warships at sea. The German warships in American and Mexican waters were actually apprised of the outbreak of the war through the Sayville station.

A very embarrassing situation was created for our government, as the question of the maintenance of neutrality on our part was directly involved.

Eventually it was found necessary—and long before our entrance into the war—to supplement the establishment of radio messages passing through the stations by the replacement of the German administrative and operating personnel by personnel of the United States Navy.

Upon our entrance into the war all radio stations not owned by the United States government were taken over bodily and entrusted to the care of the Navy by presidential proclamation.

Thus, as a victim of circumstances, and to speak the truth, had thrust into its own hands the control and management of the vitally important radio stations in our territory, and situated within, or operated from within, its own borders.

But this control would only be temporary and must terminate with the cessation of hostilities.

The Sayville station was eventually acquired by the Navy through the office of the alien enemy property custodian, and the Tuckerton station became a subject of legal contention as to its ownership.

The four Marconi super-high power stations, however, remained back to their owners upon the conclusion of peace, and these stations, together with the affiliated Marconi stations in various countries and projected British Imperial chain of high-power stations, which was to link Australia with London by radio through intermediate stations at Singapore, Bombay and Cairo, with circuits branching off to Hongkong and other important world points, would form such a powerful radio combination that it would forever be impossible to interest American capital in the formation of a strictly American radio company for the exchange of radio traffic with foreign nations and even with our own distant possessions.

Obviously, the formation of a powerful American radio company was the only procedure by which the United States could become independent in radio, as it would be impracticable for the naval radio stations to engage in commercial service with independent stations which might be established in foreign countries, because public sentiment in this country is strongly opposed to the employment of government agencies as public utilities for commercial purposes, and, moreover, the naval stations are required for our three widely separated fleets and for the services of the various government departments in connection with the administration of our outlying possessions.

After the signing of the armistice, an unexpected opportunity presented itself, however, and as a result of a prompt appeal on the part of the Navy, and a most prompt and patriotic response on the part of the officials of the General Electric Company, the management, control and operation of American radio stations and our radio services have

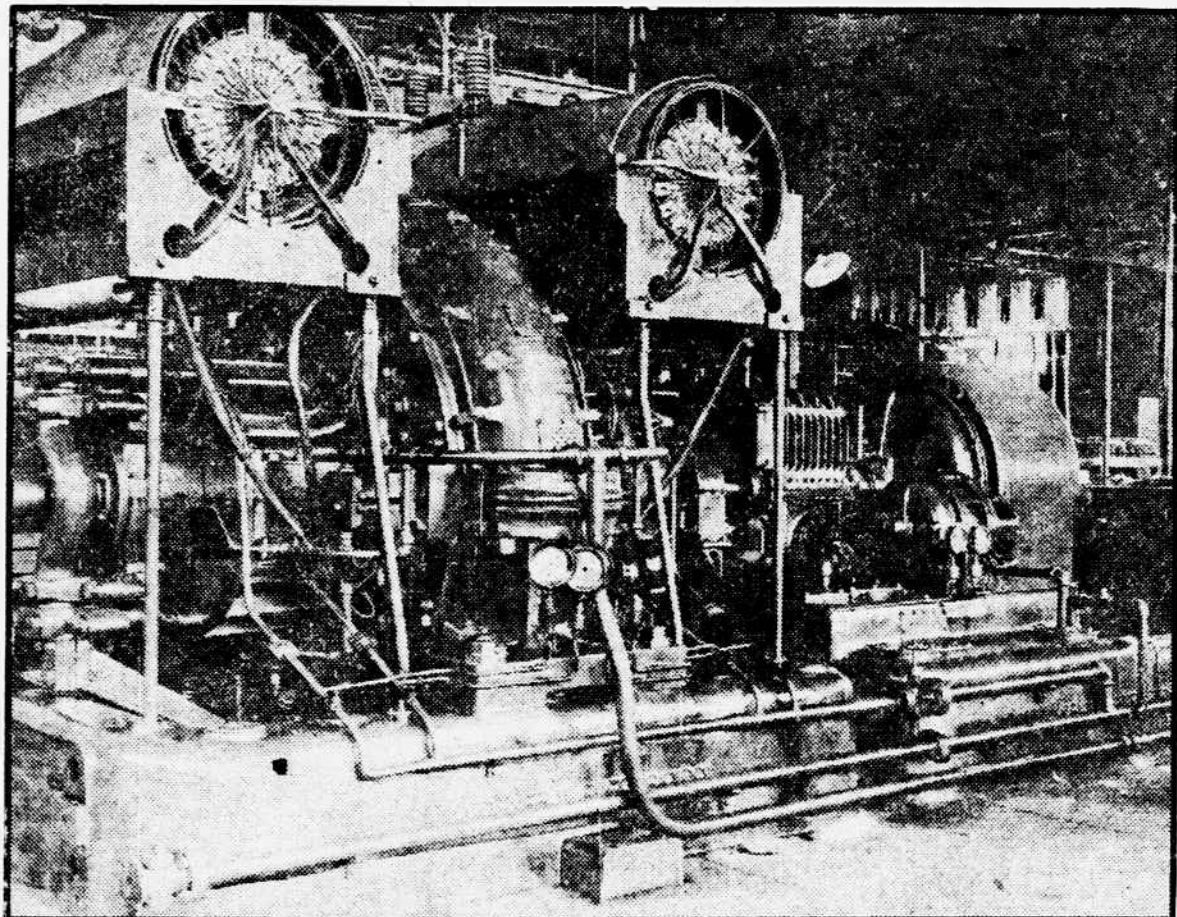
now all passed into the hands of American citizens.

This happy result was brought about by the purchase by the General Electric Company of the British interests in the American Marconi Company and the formation of the Radio Corporation of America, which absorbed the Marconi Company.

Prior to the outbreak of the war in Europe, the British Marconi Company enjoyed possession of ownership of basic radio patents to such an extent as to give it a virtual monopoly in radio, and it apparently felt that it need have no fear of a competitor and consequently must have become tardy in its research and development work.

Very rapid advances were made in

FEATURES IN CONNECTION WITH THE GOVERNMENT'S DEVELOPMENT OF RADIO



Two-hundred-kilowatt power high-frequency alternator invented by a General Electric Company radio engineer and installed in the New Brunswick super-high-power radio station during the occupancy of that station by the Navy during the war. It is used to transmit the correspondence from our government to the German government by radio which led to the armistice.

The development of radio in the United States partly as a result of the exigencies of war, however, and as a result, the General Electric Company was found upon the cessation of hostilities to possess ownership of a large number of patents covering improved radio transmitting and receiving apparatus such as the Alexanderson Alternator transmitters, vacuum tube detectors, etc.

The British Marconi Company entered into negotiations with the General Electric Company for the purchase of certain rights in these patents, and involving the purchase of more than a million dollars' worth of this improved equipment; information to this effect becoming available to the Navy through the regular trade channels.

It was obvious that if these negotiations were successful, the United States, as a national entity, could not only cease to be the factor it had become in world radio affairs as a result of the war, but the continuation of foreign-controlled radio stations and services within the United States would be assured for an indefinite period if not for all time.

The situation, from the point of view of our national interests, was therefore brought to the attention of the board of directors of the General Electric Company with the ultimate result that not only were the negotiations for the purchase of radio apparatus by the British Marconi Company broken off, but negotiations were entered into which eventually resulted in the purchase of the British holdings in the American Marconi Company and the formation of a strictly American company as its successor.

Tribute should be paid to the officials of the General Electric Company for their sense of patriotic duty, totally regardless of financial considerations, in taking this radical step in the interests of the national welfare.

Our radio services, including our ever increasingly popular radio phone broadcasting services, are now strictly American institutions.

Such a condition has always been considered by the Navy to be absolutely essential in the interests of the national defense.

The importance of this achievement will be more generally appreciated now that the public is being brought into intimate contact with radio through the radio phone.

Future developments in the broadcasting service are likely to make the value of this situation even more manifest.

REQUIRED TO GIVE BOND.

Gorgorio Vergal de Dios, a Filipino studying law at the National University, has been required by Justice Bailey of the District Supreme Court to give \$15,000 to guarantee he will not leave Washington pending the hearing of a suit for absolute divorce filed against him by his wife, Katherine M. de Dios. The wife tells the court that her husband has threatened on his graduation this month to leave Washington and return to his home at Baling Baling, P. I., and she would not have any means of compelling him to support her.

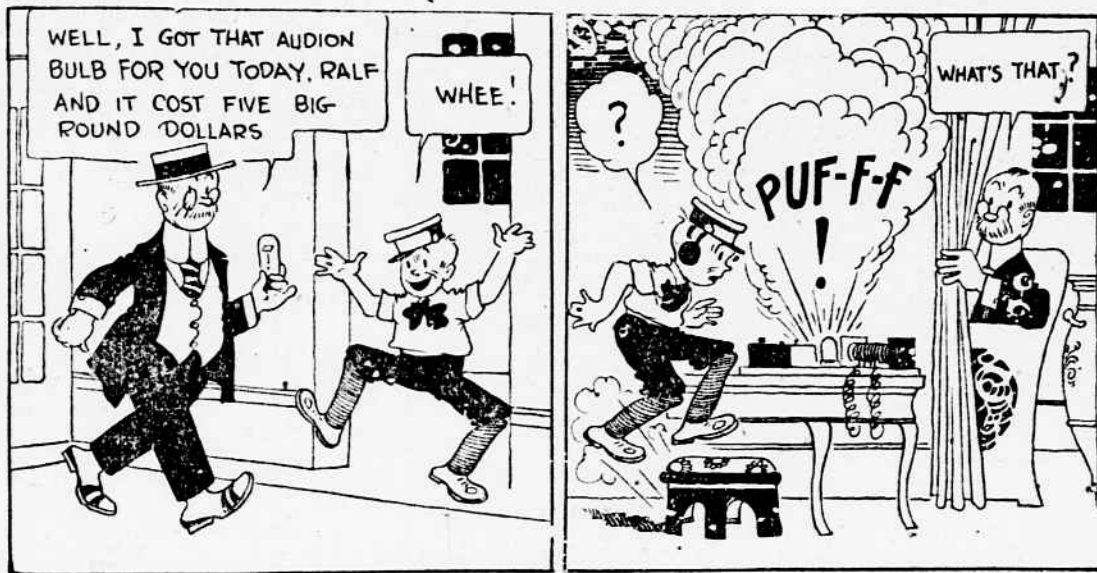
The husband is worth nearly \$100,000 in his native land, the court is advised, and receives monthly allowances through the bureau of insular affairs. The court is asked to fix a reasonable allowance for alimony.

The couple were married at Annapolis, Md., in 1921, and immediately returned to Washington, where they lived together until last September, when the wife says she was compelled to divorce her husband because he assaulted her and threatened her life. Misconduct is also alleged and correspondence between Attorney Alfred D. Smith appears for the wife.

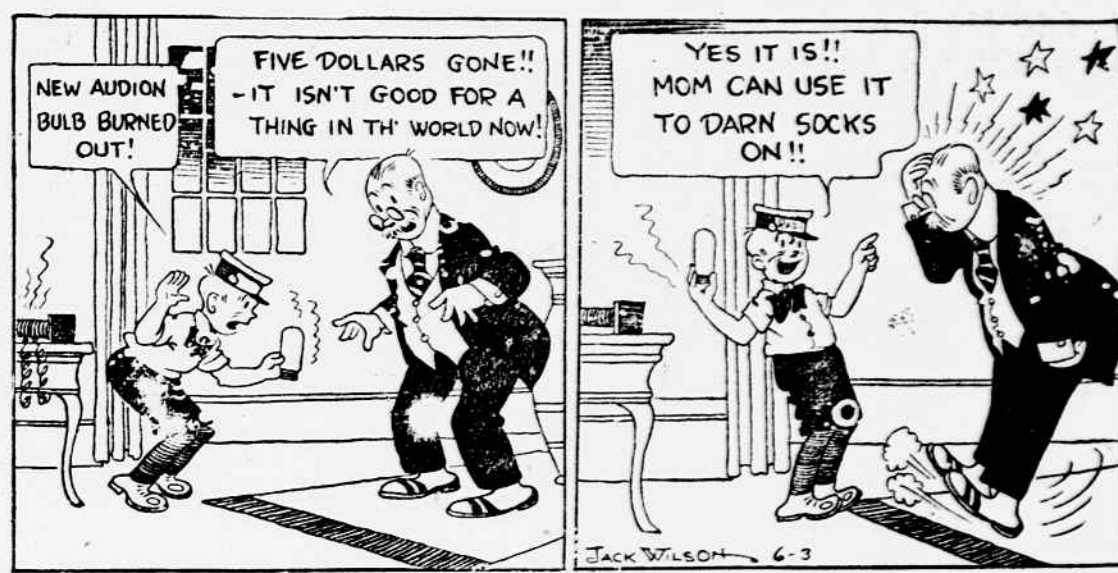
L. N. Rosenbaum & Co., financial brokers of New York, today filed suit in the District Supreme Court to recover \$528,300 from William W. Boyle, Elbridge R. Boyle and James C. Robertson.

Through Attorneys Douglas, O'Neil & Douglas the plaintiff said it entered into an agreement with the defendants to form a corporation to be known as the Boyle-Robertson Corporation. After the plaintiff corporation had arranged for the incorporation of the new company, the defendants refused to proceed with the incorporation. Residing in consideration on the sale, the plaintiff said it was to have certain stock in the company.

RADIO RALF—



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By JACK WILSON

BY RADIO TODAY

Complete Programs of Radio Broadcasting Stations.

NAA—Naval Radio Station, Radio, Va.
10:30 a.m.—Meteorological report on 5,550 meters of air transmitter.
Noon and 10 p.m.—Time signal followed by weather report and ship orders.
10:30 p.m.—Naval press news; wave length, 2,560 meters.

WDM—Church of the Covenant, Connecticut Avenue and N Street (380 Meters).
11 o'clock—Morning service; sermon by Rev. Charles Wood, pastor.
8 o'clock—Evening sermon by Dr. Wood, "Life's Failures"; musical service with harp, violin, violoncello and baritone.

WWJ—Detroit News (380 Meters—Eastern Standard Time).
2 p.m.—Concert by Detroit News Orchestra.
3 p.m.—Organ recital by Earl V. Moore of St. Paul's Cathedral.

7:30 p.m.—Services from St. Paul's Cathedral, Rev. Warren L. Rogers, dean.
6:45 p.m.—

KDKA—Westinghouse, Pittsburgh (380 Meters—Eastern Standard Time).
10:45 a.m.—Services of Point Breeze Presbyterian Church, Pittsburgh, Rev. P. H. Barker, pastor.
1:45 p.m.—Children's Bible story: "The Story of the Angel Told."
2 p.m.—Radio chapel services conducted by Lieut. Col. Thomas Stanyon of the Salvation Army of Pittsburgh.
6:30 p.m.—Episcopal Church of Pittsburgh, Rev. E. J. Van Etten, pastor.

WJZ—Westinghouse, Newark, N. J. (350 Meters—Eastern Daylight-Saving Time—Deduct One Hour).
3 p.m.—Salvation Army services conducted by Capt. J. Allan, former senior chaplain of 7th Division.
A. E. F. Sacred music by the national staff band. Music by a quartet of vocalists.
4 p.m.—Recital by William Versteeg, violoncello.
5 p.m.—Literary vespers, "The Need of Tolerance," by Edgar White Burleigh.
6:30 p.m.—Readings and records

from the "Bubble Books That Sing," by Ralph Mayhew.
6:45 p.m.—

Kasper Seidel.
7 p.m.—Children's stories.
7:30 p.m.—Some Facts That Everybody Should Know About Tea," by C. F. Hutchinson, Department of Agriculture.
8 p.m.—Recital by Alice Mengel, Russian pianist.

KYW—Westinghouse, Chicago (380 Meters—Eastern Standard Time).
3:30 p.m.—Radio chapel services conducted by Rev. G. A. MacWhorter of St. Edmund's Episcopal Church on "The Voice of God." Music by the quartet from the same church.

PLAN FOR 4TH CELEBRATION.
Plans are being completed for the annual July 4 celebration at Wilson Park under auspices of the Congress Heights Citizens' Association. The celebration will last all day. The committee in charge consists of J. A. Sullivan, chairman; Frazier C. White, G. C. Hultgren, Valentine Wahler, W. E. Kleist and E. J. Newcomb.

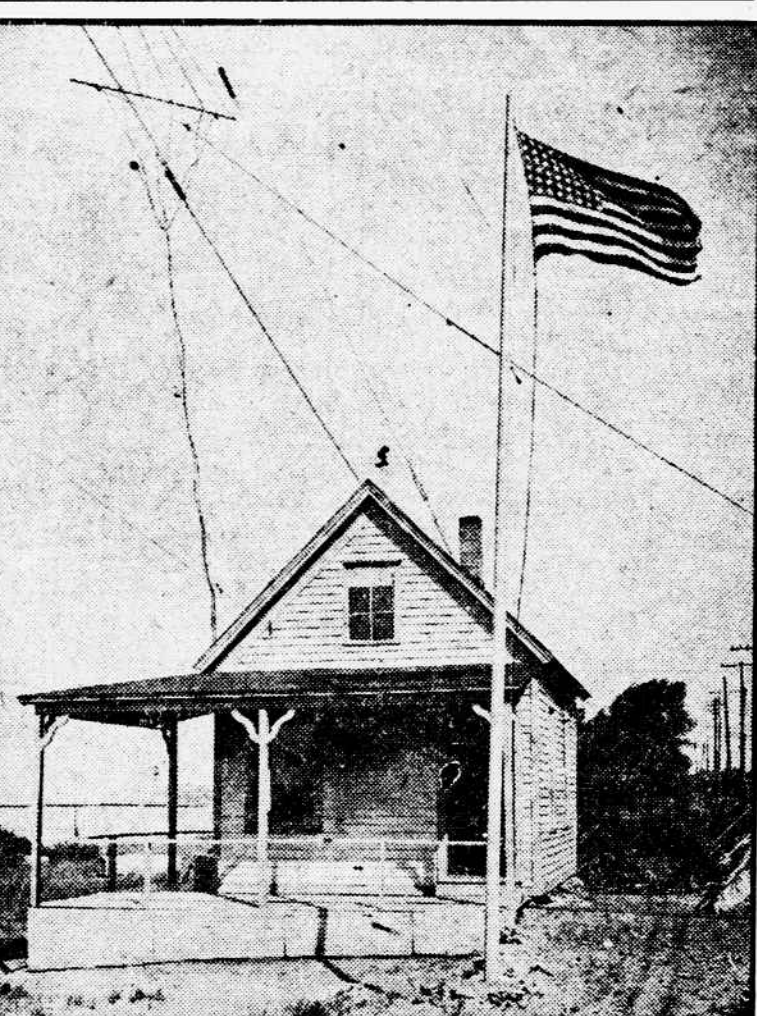
WILL CONFER DEGREES.

American University to Hold Convocation Exercises Wednesday.

Degrees will be conferred on twenty-five graduates of the American University at the convocation exercises in the amphitheater in the grove on the campus of the institution Wednesday afternoon at 2 o'clock. Announcement also will be made of the fellowships awarded by the chancellor, Bishop John W. Hamilton, who will preside.

Speakers at the convocation exercises will include Vice President Coolidge, Gen. John J. Pershing and Rt. Rev. Charles H. Brent, Primate, Episcopal Bishop of the Diocese of Western New York. Invocation will be by Rev. J. J. Muir, pastor of Trinity Baptist Church, and Rev. Dr. Morgan of the Congregational Church.

Prior to the exercises, the trustees will hold their annual meeting, which will be followed by a luncheon at 1 o'clock. At 1:45 a.m. the procession will form in front of the college of history and, led by a band, will march to the auditorium in the grove.



The American flag now flies over not only our great transoceanic super-high-power radio stations, but also over even the least important low-power stations situated along our coasts.

RADIO EXPLAINED

By E. H. LEWIS
INSTRUCTOR NEW YORK Y.M.C.A. RADIO SCHOOL

ELECTRONS.

The vacuum tubes so familiar to the radio public are sometimes called "electron tubes," "radiotrons," "audiotrons" and "pilots." The two electrode tubes used solely as rectifiers are called quite often "kenotrons." The word "tron," which is a Greek word, appears very often, as does also the word "electron."

It does seem rather strange that we should eat electricity, even though the bright scholars in school may be said to "eat it up" in their studies.

In the preceding article it was attempted to convey some idea of molecules and atoms. The molecule is the smallest possible particle of a substance which can be divided into some other substances, while the atom is the smallest particle of an elementary substance which cannot be so divided.

Now it has actually been found by scientists that even this infinitely small particle, the atom, of any elemental form of matter, contains electricity. There really must be some reason why an atom of one substance differs from that of another. Why is the element iron different from copper? Why is gold different from silver? The answer is that an atom is composed of a central nucleus, which carries a positive charge of electricity and is surrounded by extremely minute particles of negative electricity. In fact, an atom of hydrogen has been pretty conclusively proved to have just one smallest particle of negative electricity connected with it. An oxygen atom has one positive nucleus and eight particles of negative electricity. These particles of negative electricity are called "electrons," and each is so extremely small that it would compare in size with one atom as a pin head does with a building about 350 feet high and 250 feet square. The atom has really been measured, but not by observation under even the most powerful microscope. The method of measurement cannot be described here, but suffice it to say that they were very clever. It has been found, however, that electrons have no weight, since they absolutely cannot

be acted upon by the force of gravity. They have a certain mass—that is, they can be measured—but they have no weight. They are merely the smallest possible portions of negative electricity.

Electrons may then be found in varying amounts in all substances, and all kinds of matter, therefore, have electricity within them. Electricity seems to be essential to even the air we breathe and the food we eat. It does seem rather strange that we should eat electricity, even though the bright scholars in school may be said to "eat it up" in their studies.

PUPILS TO PREPARE DINNER.
Pupils of the 8B domestic science class of the Smallwood-Bowen Vocational School will demonstrate their ability in the culinary art at a dinner to be given to school officials and prominent Washington business men at the school Tuesday at 12 o'clock noon. The girls will prepare and serve a sumptuous meal, which they believe will make the average housewife envious.

BAND CONCERT.

By the Interior Department Band, under the command, Walter Reed Hospital, this evening at 8 o'clock.
March.
"Italian Rhapsody".....Ellenberg
Overture.
"King Midas".....M. Lake
Waltz.
"Jolly Fellows".....Vollstedt
Idyll.
"A Basket of Roses".....Albers
Concert polka.
"Les Hongrois".....Michels
Intermezzo.
"Just a Gem".....Tobani
Dance.
"Dance of the Hours".....Brown
Final.
"Commander-in-Chief".....Wilmarth
Charles H. Strohm, director.



Shall It Be Buds and Birds or Brooms and Dust-Pans?

DOES June mean a joyous time of buds and birds, sweet breezes and light hearts, of hours spent out o' doors in the full enjoyment of living—

Or is June a work season between winter and summer in which thoughts of housecleaning and its health-destroying toil and turmoil drive all joy from your heart?

There is no "housecleaning day" or "Spring cleaning time" in the home that knows the electric vacuum cleaner.

The never-ending grind of sweeping, dusting and beating has given place to a few minutes of easy electric cleaning.

The housewife who electric vacuum cleans starts the morning without the towel-turban and "housecleaning dress" of the broom-and-dust-pan days of unhappy memory.

Unexpected company finds her always ready to receive. She has more time for her family and her social and other affairs. She can grow up with her children instead of watching them grow away from her.

She can keep up with her husband, and abreast of the times in which she lives. Her home has the cleanliness, brightness and freshness that is the envy of every woman.

And she has the satisfaction of knowing that her prized floor coverings, hangings and upholstery retain their beauty and value and last longer without the expense of employing outside help.

Better than all the eulogies of electric cleaning is a thorough trial in your own home. Now is the time to have it. Any dealer or your lighting company will make it for you.

Your purchase of a vacuum cleaner marks an epoch in your life. It gives you more time for your children; spare hours for recreation, entertainment or education. Electricity makes possible that forward step.

Is your city or town moving forward equally swiftly? No city can unless it can see clearly and has all of the power it can use. Is your city helping its electric light and power company to grow steadily and prosperously so it can furnish that light and power service?

There's a handy attachment with the electric vacuum cleaner that insures you against moths and ridges your closets of germ-bearing dirt.



Banish Dirt and Dust the Electric Cleaner Way

